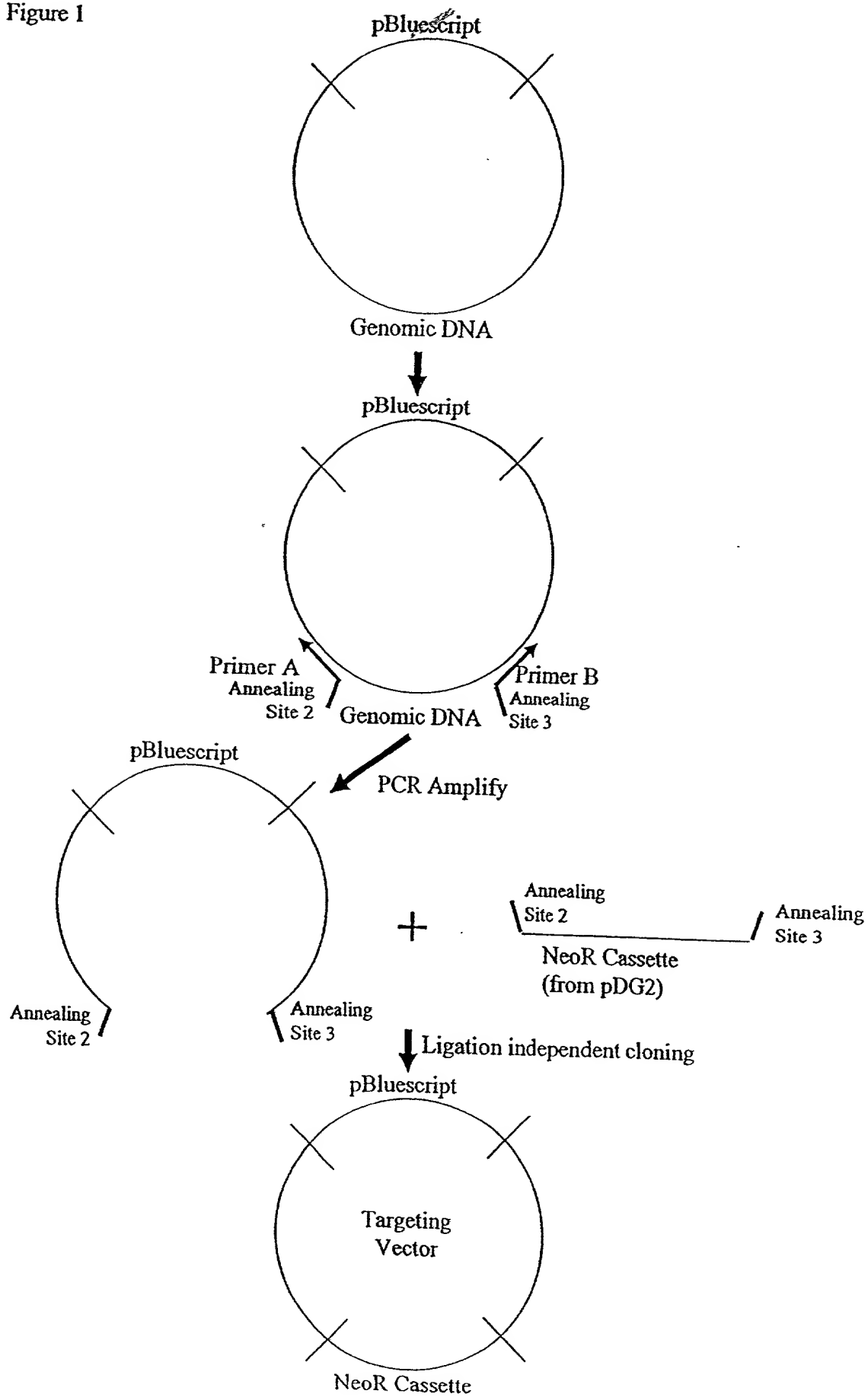


Figure 1



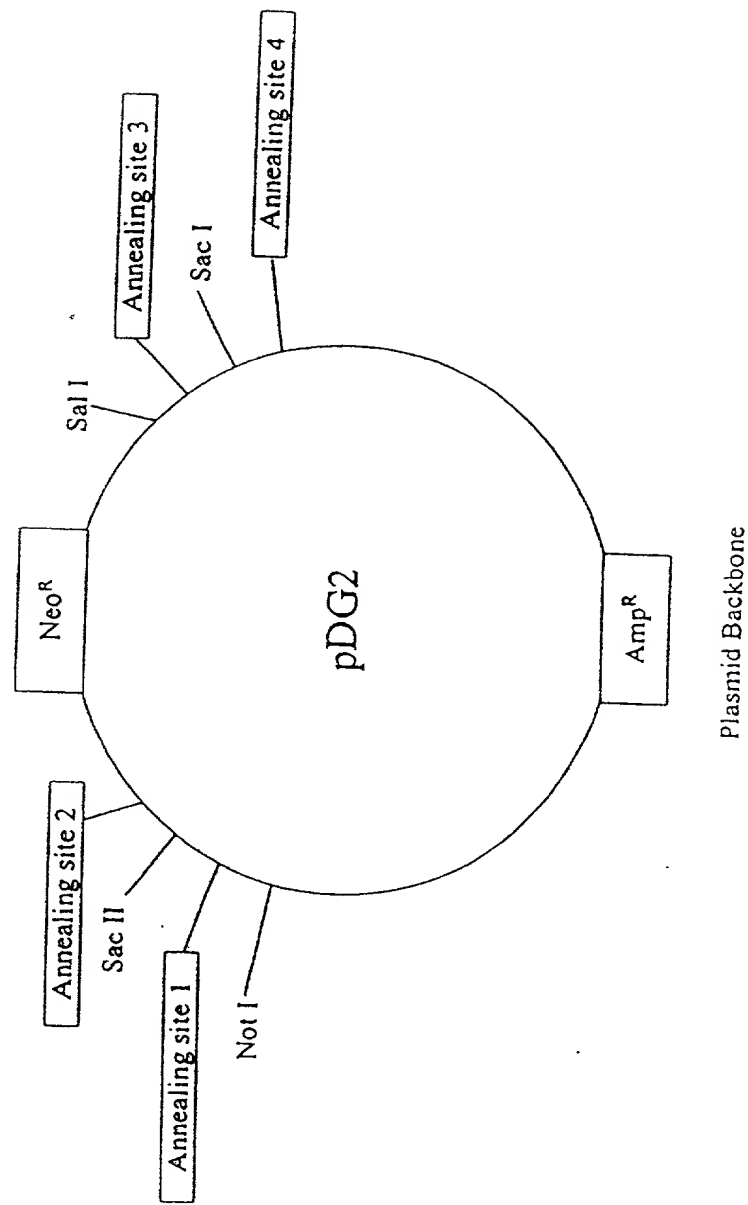


FIGURE 2A

FIGURE 2B

pDG2:

GTTAACTACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTCTAAATACATTCAAATA
 TGTATCCGCTCATGAGACAATAACCCGTATAAATGCTTCAATAATATTGAAAAGGAAGAGTATGAGTATTCAACATTTTC
 CGTGTGCGCCCTTATTCCTTTTTCGGGCAATTTGCCTTCTGTTTTGCTCACCAGAAACCGTGGTGAAGTAAAGAA
 TGCTGAAGATCAGTTGGGTGCAGAGTGGGTACATCGAACTGGATCTCAACAGCGGTAAAGATCCTTGAGAGTTTTCGCC
 CCGAAGAACGTTCTCCATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTATCCCGTGTGACGCCGGGCAA
 GAGCAACTCGGTGCGGCATACACTATTCTCAGAATGACTTGGTTGAGTACTCACCAGTACAGAAAAGCATCTTACGGA
 TGGCATGACAGTAAGAGAATTATGCAGTGTGCCATAACCATGAGTGATAACACTGCGGCCAATTACTTCTGACAACGA
 TCGGAGGACCGAAGGAGCTAACCGCTTTTTTGACAAATCGGGGATCATGTAACCTCGCCTTGATCGTTGGGAACCGGAG
 CTGAATGAAGCCATACCAAACGACGAGCGTGACACCAAGATGCTGTAGCAATGGCAACAACGTTGCGCAAACTATTAAAC
 TGGCGAACTACTTACTTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGCGGATAAAGTTGACAGGACCACTTCTGC
 GCTCGGCCCTTCGGCTGGCTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGACGCA
 CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGAGTCAGGCAACTATGGATGAACGAAATAG
 ACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGGTAACGTGACACCAAGTTTACTCATATATACTTTAGATTG
 ATTTACCCCGGTTGATAATCAGAAAAGCCCCAAAAACAGGAAGATTGTATAAGCAAAATTTTAAATTGTAAACGTTAATA
 TTTTGTAAAAATTCGCGTTAAATTTTGTAAATCAGCTCATTTTTTAAACCAATAGGCGGAAATCGGCAAAATCCCTTAT
 AAATCAAAGAATAGCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAAGAACGTTGGACTC
 CAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCACTACGTGAACCATCACCCAAATCAAGTTTTTGGGGT
 CGAGGTGCGCTAAAGCACTAAATCGGAACCCTAAGGGAGCCCCGATTAGAGCTTGACGGGAAAGCGAACGTTGGCGA
 GAAAGGAAGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAGCGGTACGCTGCGCGTAAACCACACA
 CCGCGCGCGCTTAATGCGCGCTACAGGGCGCGTAAAGGATCTAGGTGAAGATCCTTTTGATAATCTCATGACCAAAA
 TCCTTTAAGCTGAGTTTTCTGTTCACTGAGCGTCAGACCCGCTAGAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTT
 TCGCGCTAATCTGCTGCTTGCAACAAAAAACCCGCTACCCAGCGGTGGTTTGTGTCGCGGATCAAGAGCTACCAAC
 TCTTTTTCCGAAGGTAACCTGGCTTACGACAGCGCAGATACCAATACTGTTCTTCTAGTGTAGCCGTAGTTAGGCCACC
 ACTTCAAGAACTCTGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACAGTGGCTGCTGCCAGTGGCGATAAG
 TCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGGCGCAGCGGTGCGGCTGAACGGGGGGTTCGTGCAC
 ACAGCCAGCTTGGAGCGAACGACCTACACCGAAGTGAATACCTACAGCGTGAAGTATGAGAAAGCGCCACGCTTCCCG
 AAGGGGAAGAGCGGAGGATCCGTAAGCGCGCAGGTGCGAACAGGAGAGCGCAGGAGGAGCTTCCAGGGGGAAGAC
 GCGTGGTATCTTTATAGTCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGCG
 GAGCCTATGGAAGAACCGCAGCAACGCGCCTTTTACGGTTCTGCGCCTTTTGTGCGCCTTTTGTCTCATGTAAATGTG
 AGTTAGCTCACTATTAGGCACCCAGGCTTTACACTTTATGCTTCCGGCTCGTATGTTGTGTGGAATTGTGAGCGGATA
 ACAATTTACACAGGAAACAGCTATGACCATGATTACGCCAAGCTACGTAATACGACTCACTAGGCGGCGCGTTTAAAC
 AATGTGCTCCTCTTTGGCTTGCTTCGCGGGCCAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACGCGTGCT
 AGCGCGCGCCGAATTCCTGAGGATTTCGAGGGCCCTTGAGGTCAATTCTACCGGTAGGGGAGGCGCTTTCCCAAGG
 CAGTCTGGAGCATGCGCTTTAGCAGCCCCGCTGGCACTTGGCGCTACACAAGTGGCCTCTGGCCTCGCACATTCCACA
 TCCACCGGTAGCGCAACCGGCTCCGTTCTTGGTGGCCCTTCGCGCCACCTTCTACTCCTCCCTAGTCAGGAAGTTC
 CCCCCCGCCCGCAGCTCGCGTCTGCGAGGACGTGACAAATGGAAGTAGACGCTCTCACTAGTCTCGTGCAGATGGACAG
 CACCGCTGAGCAATGGAAGCGGTAGGCCCTTGGGGCAGCGGCCAATAGCAGCTTGTCTCTTCTGCTTCTGGGCTCAGA
 GGTCTGGGAAGGGTGGGTTCGCGGGGCGGCTCAGGGGCGGCTCAGGGGCGGGCGGGCGGCTCTCCGAGGCC
 GGCATTCTGCGACGCTTCAAAGCGCAGCTCTGCGCGCTGTTCTCCTCTTCTCATCTCCGGGCTTTGACCTGCAGC
 CAATATGGGATCGGCCATTGAACAAGATGGATTGCACGAGGTTCTCGGCGCTTGGGTGGAGAGGCTATTGGCTATG
 ACTGGGCAACAAGACAATCGGCTGCTGTATGCGCGCGTTCGCGCTGTGAGCGAGGGGCGCCCGTCTTTTTGTG
 AAGACCGACCTGTCCGGTGCCTGAATGAATGACGAGGAGGCGCGGCTATCGTGGCTGGCCACGAGGGCGTTCC
 TTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGACTGGCTGCTATTGGGCGAAGTCCCGGGGAGGATCTCC
 TGTCTCTCACTTGTCTCTGCGGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCT
 ACCTGCCCATTTCGACCACCAAGCGAAACATCGCATCGAGCGAGCAGTACTCGGATGGAAGCCGGTCTTGTGATCAGGA
 TGATCTGGAGCAAGAGCATCAGGGGCTCGCGCCAGCCGAATGTTCCGCAAGCTCAAGGCGCGCATGCCGACGGCGATG
 ATCTCGTCTGACCATGGCGATGCTGCTTGGCGAATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCTACGACTGT
 GGCGGCTGGGTGGTGGGACCGCTATCAGGACATAGGCTTGGCTACCCGCTGATTTGCTGAAGAGCTTGGCGGCGAATG
 GGCTGACCGCTTCTCGTCTTACGTTATCGGCTTCCGATTTCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGT
 TCTTCTGAGGGGATCGATCCGCTCTGTAAGTCTGCAGAAATGATGATCTATTAAACAATAAGATGTCCACTAAAATGG
 AAGTTTTCTGTCTACTTTTGTAAAGAGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGG
 GTGGGGTGGGGTGGGATTAGATAAATGCTGCTTTTACTGAAGGCTCTTACTATTGCTTTATGATAATGTTTCATAG
 TCTCTCGTGGGATCATTGTTTTTCTCTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTGAGTTTCA
 TAGCCTGAAGAAGAGATCAGCAGCCTCTGTTCCACATACACTTCATTCTCAGTATTGTTTTGCCAAGTTCTAATCCAT
 CAGAAGCTGACTTAGATCTGGATCCGCGCAGCTAGGCGCTCGACCTCGAGTGATCAGGTACCAAGGCTCTCGCTCTGTG
 TCCGTTGAGCTCGACGACACAGGACACGCAAAATTAATTAAGGCGGGCCGTACCCTCTAGTCAAGGCTTAAGTGAGTCTG
 TATTACGGAAGTGGCGCTCGTTTTACACGCTCGTGACTGGGGAACCCCTGGCGTTACCCAACCTTAATCGCCTTGCAGACA
 TCCCCCTTTCCGCAAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCG
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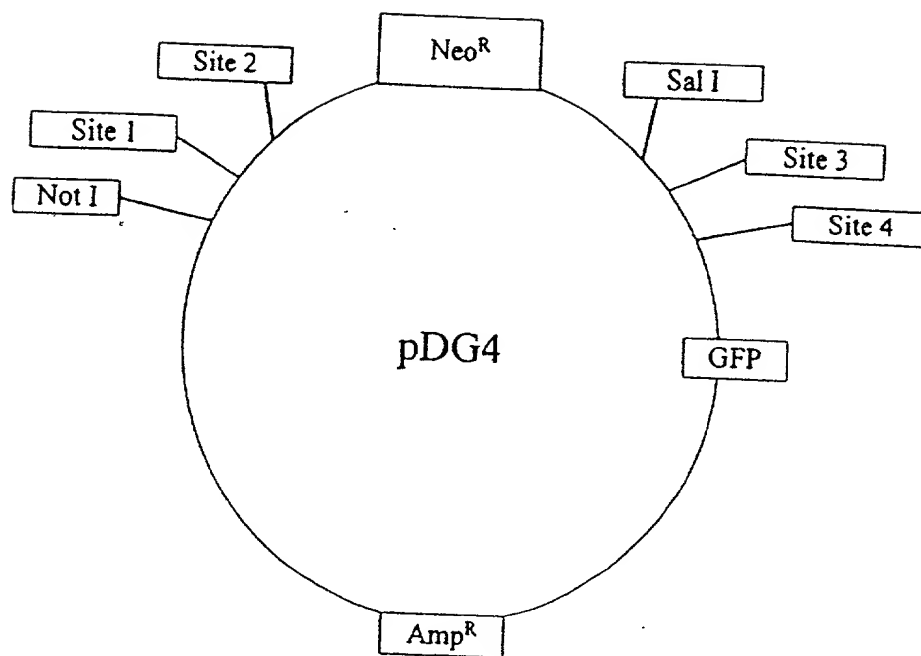


FIGURE 3A

FIGURE 3B

pDG4:

GTTTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGTTCGCGTTACATAACTTACCGTAAATGG
 CCGCCTGGCTGACCGCCCAACGACCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGA
 CTTTCCAATGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCACTTGGCAGTACATCAAGTGATCATATGCCAAGT
 ACGCCCCCTATTGACGTCAATGACGGAAATGGCCCGCTGGCATTAGCCCACTACATGACCTTATGGACTTTCCTAC
 TTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACATCAATGGGCGTGGATAGC
 GGTTTGACTCACGGGGATTTCAAGTCTCCACCCATTGACGTCAATGGGAGTTTGTTTTGGCACCAAAATCAACGGGAC
 TTTCCAAAATGTCGTAACTCCGCCCATTTGACGCAAAATGGGCGGTAGGCGTGTACGGTGGGAGTCTATATAAGCAG
 AGCTGGTTTAGTGAACCGTCAGATCCGTAGCGCTACCGGTGCGCCACCATGGTGAGCAAGGGCGAGGAGCTGTTTACCGG
 GGTGGTGCCCATCTGGTTCGAGCTGACGGGACGTAAACGGCCACAAGTTCAGCGTGTCCGGCGAGGGCGAGGGCGATG
 CCACCTACGGCAAGCTGACCTGAAGTTTCATCTGCACCAACGGCAAGCTGCCCGTGGCCCGCCCTCGTGACCACT
 CTGACCTACGGCGTGCACTGCTTCAGCGCTACCCCGACCATGAAGCAGCAGCACTTCTTCAAGTCCGCCATGCCCGA
 AGGCTAGTCCAGGAGCGCACCATCTTCTTCAAGGACGACCGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCG
 ACACCTGGTGAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCTGGGGCAAGCTGGAGTAC
 AACTACAACAGCCACAACGTCTATATCATGGCCGACAGCAGAAGAACGGCATCAAGGTGAAGTCAAGATCCGCCACAA
 CATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCGAGCAACACCCCATCGGGCAGCGCCCGTGTCTGTGCCCG
 ACAACCACTACCTGAGGACCCAGTCCGCCCTGAGCAAGACCCCAACGAGAAGCGCGATCAGATGGTCTGTGAGGTTT
 GTGACCGCCGCGGGATCACTCTCGGCATGGACGAGCTGTACAAGTCCGGAATCAGATCCACCGGATCTAGATAACTGTAT
 CATAATCAGCCATACCACTTTGTAGAGGTTTACTTGTCTTAAAAAACCTCCACACCTCCCTGAACTGAAACATA
 AAATGAATGCAATTGTGTGTGTTAACTGTTTATTGAGCTTATAATGGTTACAAATAAAGCAATAGCATCAAAATTTT
 ACAAATAAAGCATTTTTTCACTGCATTCTAGTTGTGGTTTGTCCAACTCATCAATGTATCTTAACGCAACTACGTCA
 GGTGGCACTTTTGGGGAAATGTGGCGGAACCCCTATTGTTTATTTTCTAAATACATTCAATATGTATCCGCTCAT
 GAGACAATAACCTGATAAATGCTTCAATAATTGAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTGCGCCTTA
 TTCCCTTTTTTGGCGCATTTTGGCTTCTGCTTTTGTGTCACCCAGAAACGCTGGTGAAAGTAAAGATGCTGAAGATCAG
 TTGGGTGCAACGAGTGGGTTACATCGAATCGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTGCGCCCGAAGAACGTTT
 TCCAATGATGAGCACTTTTAAAGTTCGTATGTGGCGCGTATTATCCCGTGTGACGCGGGCAAGAGCAACTCGGTC
 GCCGCATACACTATTCTCAGAAATGACTTGGTTGAGTACTCACCAGTCACAGAAAGCATCTTACGGATGGCATGACAGTA
 AGAGAATTATGCACTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCGGAGGACCGAA
 GGAGCTAACCGCTTTTTTGCACAACATGGGGATCATGTAAGTCTGCTGATCGTTGGGAACCGGAGCTGAATGAAGCCA
 TACCAAAACGAGCGGTGACACCAAGATGCTGTAGCAATGGCAACAGTTGCGCAACTATTAAGTGGCGCAACTACTT
 ACTCTAGCTTCCCGGCAACAATTAATAGACTGGATGGAGGGCGATAAAGTTGCAAGGACCACTTCTGCGCTCGGCCCTTCC
 GGCTGGCTGGTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCACTGCGGCCAGATG
 GTAAGCCCTCCCGTATCGTAGTTATCTACAGCAGCGGGAGTCAGGCAACTATGGATGAACGAAATAGACAGATCGCTGAG
 ATAGTGCTCTCACTGATTAAGCATTTGTAAGTGTGACAGCAAGTTTACTCATATATACCTTAGATTGATTTACCCCGGTT
 GATAATCAGAAAGCCCAAAACAGGAAGATTGTATAAGCAAAATATTTAAATTGTAAGCTTAATATTGTTAAATTT
 CGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAACCAATAGGCGGAAATCGGCAAAATCCCTTATAAATCAAAAGAAT
 AGCCCCGAGATAGGGTTGAGTGTGTTCCAGTTTGGAAACAGAGTCCACTATTAAGAAAGTGGACTCCAACGTCAAAGGG
 CGAAAAACCGTCTATCAGGGCGATGGCCACTACGTGAACCATCACCAAAATCAAGTTTTTGGGGTCGAGGTGCGGTAA
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 TGTAGCACCGCTACATACCTCGCTCTGCTAATCCTGTTACAGTGGCTGCTGCCAGTGGCGATAAGTGTGCTTACCG
 GGTGGACTCAAGACGATAGTTACCGGATAAGCGCGCAGCGCTCGGGCTGAACGGGGGTTCTGTGCACACAGCCAGCTTG
 GAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGC
 GGACAGGTATCCGGTAAGCGGCGAGGTGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGAAACGCTGGTATCTTT
 ATAGTCTGTGCGGTTTTGCGCACCTCTGACTTGAGCGTCAATTTTTGTGATGCTCGTCAGGGGGCGGAGCCTATGGA
 AACGCCAGCAACGCGGCTTTTTACGGTTCTGCGCTTTTGTGCTGCTTGTGCTCAGATGTAATGTAGTTAGCTCACTC
 ATTAGGCACCCAGGCTTTTACCTTTATGCTTCCGCTCGTATGTTGTGTTGGAATTTGTAGCGGATAACAAATTTCAACA
 GGAAACAGCTATGACCATGATTACGCCAAGTACGTAATACCACTCACTAGGCGGCGGTTTAAACAAATGTGCTCCTCT
 TTGGCTTGCTTCCGCGGGCCAAAGCCAGACAAGAACAGTTGACGTCAAGCTTCCCGGACGCGTGTAGCGGCGCGCGA
 ATTCTGCAAGATTGAGGGCCCTGCAAGTCAATTTACCGGGTAGGGGAGGCGCTTTTCCCAAGGCAAGTCTGGAGCAT
 GCGCTTTAGCAGCCCCGCTGGCACTTGGCGCTACACAAGTGGCCTCTGCGCTCGCACACATCCACATCCACCGGTAGCG
 CCAACCGGCTCCGTTCTTTGGTGGCCCCCTCGCGCCACCTTCTACTCTCCCTAGTCAGGAAGTCCCCCGGCCCGC
 AGCTCGCGTGTGACAGCGTGACAAATGGAAGTAGCAGCTCTCACTAGTCTCGTGAGTGGACAGCAGCGCTGAGCAA
 TGGAAAGCGGTAGGCTTTTGGGGCAGCGGCCAATAGCAGCTTGTCTCTTCTGCTTCTGGGCTCAGAGGCTGGGAAGGG
 TGGGTCCGGGGCGGGCTCAGGGGCGGGCTCAGGGGCGGGCGGGCGGAAGGTCTCCCGAGGCGCGGATTCTCGCAC
 GCTTCAAAGCGCACGTCTGCGCGCTGTTCTCTCTCTCATCTCGGGCTTTTCGACCTGCAGCCAATATGGGATCG
 GCCATTGAACAAGATGGATTGCACGAGGTTCTCGGCGCTTGGGTGGAGAGGCTATTCCGCTATGACTGGGCACAACA
 GACAATCGGCTGCTGTATGCGCGGTGTTCCGGCTGTGACGCGAGGGCGCGCGGTTCTTTTGTCAAGACCGACCTGT
 CCGGTGCCCTGAATGAAGTGCAGGACGAGGCGAGCGCGCTATCGTGCTGGCCACGAGCGGCTTCTTGGCGAGCTGTG
 CTCGACGTGTCACTGAAGCGGGAAGGACTGGCTGCTATTGGGCGAAGTGGCGGGCAGGATCTCTGTCTCATCTCACCT

TGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCG
ACCACCAAGCGAAACATCGCATCGAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACGAA
GAGCATCAGGGGCTCGCGCCAGCCGAAC TTTCCGCGAGGCTCAAGGCGCGCATGCCCGACGGCGATGATCTCGTCGTGAC
CCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAATGGCCGCTTTCTGGATT CATCGACTGTGGCCGGCTGGGTG
TGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTC
CTCGTGCTTTACGGTATCGCGCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGGGGA
TCGATCCGTCCTGTAAGTCTGCAGAAATTGATGATCTATTAAACAATAAAGATGTCCACTAAAATGGAAGTTTTCTGT
CATACTTTGTTAAGAAGGGTGAGAACAGAGTACCTACATTTGAATGGAAGGATTGGAGCTACGGGGGTGGGGGTGGGT
GGGATTAGATAAATGCCTGCTCTTTACTGAAGGCTCTTTACTATTGCTTTATGATAATGTTTCATAGTTGGATATCATAA
TTTAAACAGCAAAACCAATTAAGGGCCAGCTCATTCTCCCACTCATGATCTATAGATCTATAGATCTCTCGTGGGAT
CATTGTTTTCTCTTGATTCCCACTTTGTGGTTCTAAGTACTGTGGTTTCCAAATGTGTCAGTTTCATAGCCTGAAGAAC
GAGATCAGCAGCCTCTGTTCCACATACACTTCATTCTCAGTATTGTTTTGCCAAGTTCTAATTCATCAGAAGCTGACTC
TAGATCTGGATCCGGCCAGCTAGGCCGTGACCTCGAGTGATCAGGTACCAAGGTCCTCGCTCTGTGTCGGTTGAGCTCG
ACGACACAGGACACGCAAAATTAATTAAGGCCGGCCCGTACCCTCTAGTCAAGGCCTTAAGTGAGTCGTATTACGGACTGG
CCGTGTTTTTACAACGTCGTGACTGGGAAAACCTGGCGTTACCCAACCTTAATCGCCTTGCGACACATCCCCCTTTGCGC
AGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCGCTTCGC
TTGGTAATAAAGCCCGCTTCGGCGGGCTTTTTTTT

FIGURE 3B (Continued)

Annealing site	Sequence	Sequence after digestion
1	5' tgtgctcctcttttggttggttccaa... 3' 3' acacgaggagaaacccaacgaagggtt... 5'	5' tgtgctcctcttttggttggttccaa... 3' 3' tt... 5'
2	5' ctgggttcttgtctgggttggttccaa... 3' 3' gaccaagaacagacccaacgggtt... 5'	5' ctgggttcttgtctgggttggttccaa... 3' 3' tt... 5'
3	5' ggtcctcgctctgtgtccgttgaa... 3' 3' ccaggagcgagacacaggaactt... 5'	5' ggtcctcgctctgtgtccgttgaa... 3' 3' tt... 5'
4	5' ttbgcgtgtcctgtgtcgtcgaa... 3' 3' aaacgcacaggacacagcaggtt... 5'	5' ttbgcgtgtcctgtgtcgtcgaa... 3' 3' tt... 5'

FIGURE 4

Annealing site	Sequence		Sequence after digestion	
1	5' AATgtgctccctcttcttggcttgcttCCGC	3'	5' AA	3'
	3' Ttacacgaggagaaaccgaacgaagg	5'	3' Ttacacgaggagaaaccgaacgaagg	5'
2	5' AActggttcttctgtctggttgCCGC	3'	5' AA	3'
	3' Ttgaccaagaacagaccgaaccggg	5'	3' Ttgaccaagaacagaccgaaccggg	5'
3	5' AAggtcctcgctctgtgtccgttGAGCT	3'	5' AA	3'
	3' Ttccaggagcgagacacaggaac	5'	3' Ttccaggagcgagacacaggaac	5'
4	5' AAttgcgtgtcctgtgtcgtcGAGCT	3'	5' AA	3'
	3' Ttaaacgcacaggacacagcagc	5'	3' Ttaaacgcacaggacacagcagc	5'

FIGURE 5

FIGURE 6

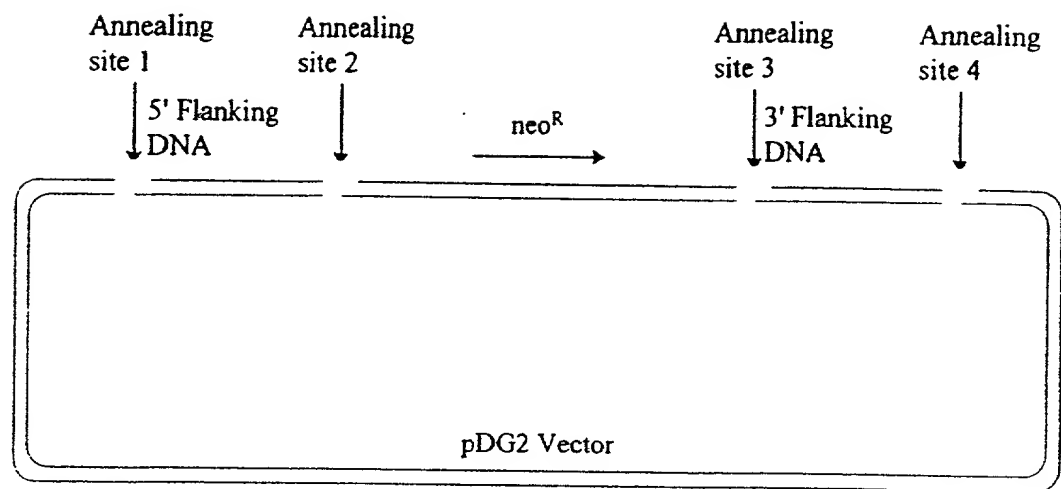
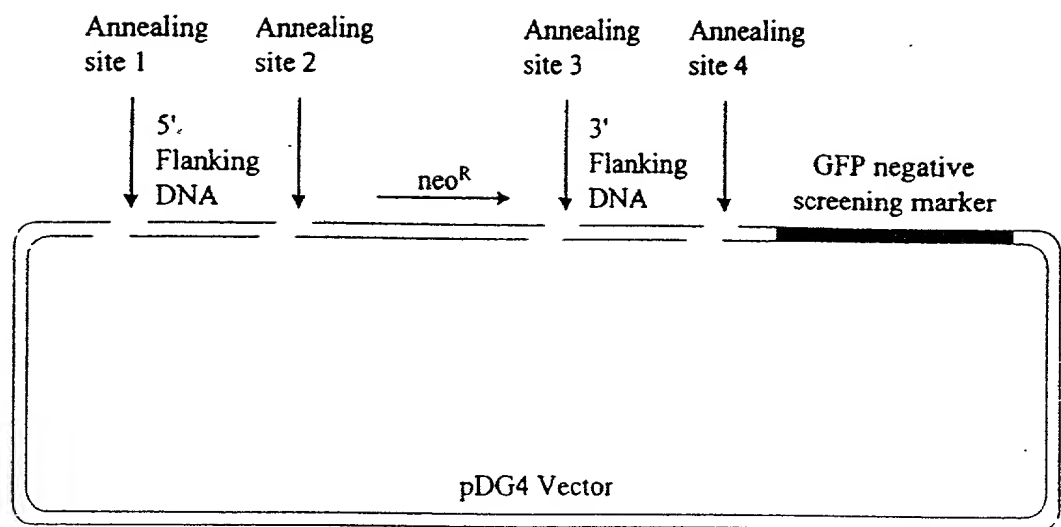


FIGURE 7



TCGGTTGGGCCCAGCAACTTCTAGCAAGCAGGCTACCCTTAGGACCATCCATATCCGATGAGCTCTACAG
 TGGCTGCCTCCACTATGCCTGTGTCTGTGGCGGCCTCCAAGAAGGAGTCTCCAGGTAGATGGGGCCTTGG
 AGAGGATCCAACAGGTGTGGGCCCCCTCGCTCCAGTGCCGAGTGTGTGGGGACAGCAGCAGTGGGAAACAT
 TATGGCATCTATGCCTGCAATGGCTGCAGTGGCTTCTTCAAGAGGAGTGTGAGAAGGAGGCTCATCTACA
 GGTGCCAAGTCGGGGCAGGGATGTGCCCAGTGGATAAGGCCCATCGCAATCAGTGCCAGGCCTGCCGGCT
 GAAGAAGTGCTTACAAGCAGGCATGAACCAAGATGCTGTGCAGAATGAGCGCCAACCTCGGAGCATGGCT
 CAGGTCCACCTGGATGCCATGGAAACAGGCAGTGACCCCGATCAGAACCAGTGGTAGCCTCTCCTGCTC
 TGGCAGGGCCCAGTCCCCGGGGCCCCACGTCTGTGTCTGCAACCAGAGCCATGGGCCACCACTTTATGGC
 CAGCCTTATCACCGCCGAAACTTGTGCTAAACTGGAGCCAGAGGACGCTGAAGAGAATATTGATGTCACC
 AGCAATGACCCCGAGTTCCCCGCATCCCCCTGCAGTCTGGATGGCATCCATGAGACATCTGCTCGCCTGC
 TCTTCATGGCTGTCAAATGGGCCAAAAAATTGCCTGTGTTTTCCAACCTGCCTTTCCGGGACCAGGTGAT
 CTTGCTGGAAGAGGCATGGAATGAGCTTTTCTTCTTGGAGCCATACAGTGGTCTCTGCCCTTGGACAGC
 TGCCCACTGCTGGCACCACTGAGGCGTCCGGCAGCTCTCAGGGCAGGCTGGCCTTGGCCAGTGCAGAGA
 CGCGCTTCTTGCAGGAAACCATCTCCCGGTTCCGAGCTCTGGCAGTGGATCCCACAGAGTTTGCCTGCCT
 GAAGGCCCTGGTCTCTTCAAACCTGAAACACGAGGCCTGAAGGATCCTGAGCACGTGGAGGCTTTGCAG
 GACCAGTCCCAGGTGATGCTAAGCCAGCATAGCAAGGCTCACCACCCAGCCAGCCTGTGAGGTTTGGGA
 AATTGCTCCTCCTGCTCCCATCTTTGAGGTTCCCTCACGGCTGAGCGCATTGAGCTTCTCTTTCAGAAA
 GACCATAGGGAACACTCCGATGGAGAAGCTCCTGTGTGACATGTTCAAAAAGTAGTTGGGAGTGCCAAGT
 GTCCACAGGCACCCAGGGGGGCAGCACATCTTAGAAGCTAAATAGTTCCCTGCCTTTCTCAGCCAGTAAT
 TCCACATTGAGGTATTCCTACCTAGCAGAAATTTCTCCCAAAATATATTATTGGCATATTCATTGCCATC
 CTAATCTTAATACCCCTAACTCTGCTTGGGCAGTAGAATGCATGGATGCGTTGTTATATTCATAGGAGAA
 ACAGCTTTGGCAA
 (SEQ ID NO: 19)

Targeting Vector (5' arm; 200 bp flanking neo insert):

AGACTGAAAGACAGACAGACAGACAGAGGGGTTAAAGATGGATGCATCGGTTGGGCCCAGCAACT
 TCTAGCAAGCAGGCTACCCTTAGGACCATCCATATCCGATGAGCTCTACAGTGGCTGCCTCCACTATG
 CCTGTGTCTGTGGCGGCCTCCAAGAAGGAGTCTCCAGGTAGATGGGGCCTTGGAGAGGATCCAAC
 (SEQ ID NO: 20)

Targeting Vector (3' arm; 200 bp flanking neo insert):

CTCCAGTGCCGAGTGTTTGGGGACAGCAGCAGTGGGAAACATTATGGCATCTATGCCTGCAATGGCTG
 CAGTGGCTTCTTCAAGAGGAGTGTGAGAAGGAGGCTCATCTACAGGTGCCACAGCTCTGCCGGCCTG
 CCCCCGTGTGCCTAGCACGGGTGGAGGGCGTTCAGGGAAAGCGGAAGACGAGACCAGGGCAAACA
 (SEQ ID NO: 21)

FIG. 8